

(non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003053960	A1	20030320
APPLICATION INFO.:	US 2002-223707	A1	20020819 (10)
RELATED APPLN. INFO.:	Continuation of Ser. No. WO 2001-NL133, filed on 19 Feb 2001, UNKNOWN		

	NUMBER	DATE
PRIORITY INFORMATION:	EP 2000-200550	20000217
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	BANNER & WITCOFF, LTD., 28 STATE STREET, 28th FLOOR, BOSTON, MA, 02109	
NUMBER OF CLAIMS:	12	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	6 Drawing Page(s)	
LINE COUNT:	776	
CAS INDEXING IS AVAILABLE FOR THIS PATENT.		

AB The invention relates to a **powder** formulation for administration by inhalation comprising an active substance and a pharmaceutically acceptable excipient, which composition has the form of a physical mixture and comprises from 5 to 25 wt. % of the excipient, and wherein the active substance has a **particle** size distribution of from 0.5 to 10 .mu.m, and wherein the excipient has a **particle** size distribution of from 15 to 500 .mu.m.

L4 ANSWER 8 OF 21 USPATFULL on STN  
ACCESSION NUMBER: 2003:40663 USPATFULL  
TITLE: Dry **powder** compositions having improved dispersivity  
INVENTOR(S): Kuo, Mei-Chang, Palo Alto, CA, United States  
Lechuga-Ballesteros, David, Santa Clara, CA, United States  
PATENT ASSIGNEE(S): Inhale Therapeutic Systems, Inc., San Carlos, CA, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US <del>6518239</del>	B1	20030211
APPLICATION INFO.:	US 2000-548759		20000413 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2000-178415P	20000127 (60)
	US 2000-178383P	20000127 (60)
	US 1999-172769P	19991220 (60)
	US 1999-164236P	19991108 (60)
	US 1999-162451P	19991029 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	GRANTED	
PRIMARY EXAMINER:	Park, Hankyel T.	
LEGAL REPRESENTATIVE:	Evans, Susan T., Cagan, Felissa H.	
NUMBER OF CLAIMS:	40	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	0 Drawing Figure(s); 0 Drawing Page(s)	
LINE COUNT:	1632	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention provides a highly dispersible formulation comprising an active agent and a dipeptide or tripeptide comprising at least two leucyl residues. The composition of the invention possesses superior aerosol properties and is thus preferred for aerosolized

administration to the lung. Also provided are a method for (i) increasing the dispersibility of an active-agent containing formulation for administration to the lung, and (ii) delivery of the composition to the lungs of a subject.

L4 ANSWER 9 OF 21 USPATFULL on STN

ACCESSION NUMBER: 2003:33158 USPATFULL  
TITLE: Pulmonary delivery in treating disorders of the central nervous system  
INVENTOR(S): Bartus, Raymond T., Sudbury, MA, United States  
Emerich, Dwaine F., Cranston, RI, United States  
PATENT ASSIGNEE(S): Advanced Inhalation Research, Inc., Cambridge, MA, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6514482	B1	20030204
APPLICATION INFO.:	US 2000-665252		20000919 (9)
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	GRANTED		
PRIMARY EXAMINER:	Dees, Jose' G.		
ASSISTANT EXAMINER:	Haghighatian, M.		
LEGAL REPRESENTATIVE:	Hamilton, Brook, Smith & Reynolds, P.C.		
NUMBER OF CLAIMS:	42		
EXEMPLARY CLAIM:	1		
NUMBER OF DRAWINGS:	15 Drawing Figure(s); 9 Drawing Page(s)		
LINE COUNT:	1360		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A method of pulmonary delivery of a medicament, for example a dopamine precursor or a dopamine agonist, which includes administering to the respiratory tract of a patient in need of rescue therapy **particles** comprising an effective amount of a medicament. The **particles** are delivered to the pulmonary system and are released into the blood stream and delivered to the medicament's site of action in a time sufficiently short to provide the rescue therapy. In addition to the medicament, the **particles** can include other materials such as, for example, phospholipids, amino acids, combinations thereof and others. Preferred **particles** have a tap density of less than about 0.4 g/cm.<sup>sup.3</sup>.

L4 ANSWER 10 OF 21 USPATFULL on STN

ACCESSION NUMBER: 2003:23278 USPATFULL  
TITLE: Control of process humidity to produce large, porous **particles**  
INVENTOR(S): Chen, Donghao, Lexington, MA, UNITED STATES  
Batycky, Richard P., Newton, MA, UNITED STATES  
Johnston, Lloyd, Belmont, MA, UNITED STATES  
Mintzes, Jeffrey, Brighton, MA, UNITED STATES  
PATENT ASSIGNEE(S): Advanced Inhalation Research, Inc., Cambridge, MA, UNITED STATES, 02139 (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003017113	A1	20030123
APPLICATION INFO.:	US 2001-837620	A1	20010418 (9)
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	APPLICATION		
LEGAL REPRESENTATIVE:	HAMILTON, BROOK, SMITH & REYNOLDS, P.C., 530 VIRGINIA ROAD, P.O. BOX 9133, CONCORD, MA, 01742-9133		
NUMBER OF CLAIMS:	28		
EXEMPLARY CLAIM:	1		
NUMBER OF DRAWINGS:	4 Drawing Page(s)		
LINE COUNT:	1000		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

```
=> +s l3 and (MMAD or (aerodynamic diameter))
+S IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).
```

```
=> s l3 and (MMAD or (aerodynamic diameter))
L4          21 L3 AND (MMAD OR (AERODYNAMIC DIAMETER))
```

```
=> s l4 and flake
=> s l4 and flake
L5          1 L4 AND FLAKE
```

```
=> s l4 and flake?
L6          1 L4 AND FLAKE?
```

```
=> d l6 ibib abs
'ABS' IS NOT A VALID FORMAT FOR FILE 'EUROPATFULL'
```

The following are valid formats:

```
MAX ----- AN, ED, UP, EW, FS, TI, TIDE, TIFR, IN, PA, PAN, AG, AGN,
              OS, SO, DT, LA, DS, PIT, PI, OD, AI, PRAI, RLI, NTE, REP,
              REN, IC (ICM, ICS), ICA, ICI, CM, FA, GIS, PGC, CLMN, AB,
              ABDE, ABFR, DETD, DETDDE, DETDFR, CLMDE, CLMFR
MAXG ----- MAX plus GI
MAX.OS ----- MAX, OS only
MAXG.OS ----- MAX.OS plus GI
MAX.PS ----- MAX, PS only
IMAX ----- MAX, indented with text labels
IMAX.OS ----- MAX, indented with text labels, OS only
IMAX.PS ----- MAX, indented with text labels, PS only

ALL ----- AN, ED, UP, EW, FS, TI, IN, PA, PAN, AG, AGN, OS, SO, DT,
              LA, DS, PIT, PI, OD, AI, PRAI, RLI, NTE, REP, REN, IC (ICM,
              ICS), ICA, ICI, CM, FA, GIS, PGC, CLMN, AB*, DETD*, CLM*
              (* German or French text if English text is not available)
ALLG ----- ALL plus GI
ALL.OS ----- ALL, OS only
ALLG.OS ----- ALL.OS plus GI
ALL.PS ----- ALL, PS only
IALL ----- ALL, indented with text labels
IALLG ----- IALL plus GI
IALL.OS ----- ALL, indented with text labels, OS only
IALLG.OS ----- IALL.OS plus GI
IALL.PS ----- ALL, indented with text labels, PS only

ALLDE ----- AN, ED, UP, EW, FS, TIDE, IN, PA, PAN, AG, AGN, OS, SO, DT,
              LA, DS, PIT, PI, OD, AI, PRAI, RLI, NTE, REP, REN, IC (ICM,
              ICS), ICA, ICI, CM, FA, GIS, PGC, CLMN, ABDE* , DETDDE*, CLMDE*
              (* English or French text if German text is not available)
ALLGDE ----- ALLDE plus GI
ALLDE.OS ----- ALLDE, OS only
ALLGDE.OS ----- ALLDE.OS plus GI
ALLDE.PS ----- ALLDE, PS only

ALLFR ----- AN, ED, UP, EW, FS, TIFR, IN, PA, PAN, AG, AGN, OS, SO, DT,
              LA, DS, PIT, PI, OD, AI, PRAI, RLI, NTE, REP, REN, IC (ICM,
              ICS), ICA, ICI, CM, FA, GIS, PGC, CLMN, ABFR* , DETDFR*, CLMFR*
              (* English or German text if French text is not available)
ALLGFR ----- ALLFR plus GI
ALLFR.OS ----- ALLFR, OS only
ALLGFR.OS ----- ALLFR.OS plus GI
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ALLFR.PS --- ALLFR, PS only

BRIEF ----- AN, ED, UP, EW, FS, TI, IN, PA, PAN, AG, AGN, OS, SO, DT,
               LA, DS, PIT, PI, OD, AI, PRAI, RLI, NTE, REP, REN, IC (ICM,
               ICS), ICA, ICI, CM, FA, GIS, PGC, CLMN, AB*, MCLM*
               (* German or French text if English text is not available)
BRIEFG ----- BRIEF plus GI
BRIEF.OS --- BRIEF, OS only
BRIEFG.OS -- BRIEF.OS plus GI
BRIEF.PS --- BRIEF, PS only
IBRIEF ----- BRIEF, indented with text labels
IBRIEFG ----- IBRIEF plus GI
IBRIEF.OS -- BRIEF, indented with text labels, OS only
IBRIEFG.OS - IBRIEF.OS plus GI
IBRIEF.PS -- BRIEF, indented with text labels, PS only

BIB ----- AN, ED, UP, EW, FS, TI, TIDE, TIFR, IN, PA, PAN, AG, AGN,
            OS, SO, DT, LA, DS, PIT, PI, OD, AI, PRAI, RLI, NTE, REP, REN
BIB.OS ----- BIB, OS only
BIB.PS ----- BIB, PS only
IBIB ----- BIB, indented with text labels
IBIB.OS ----- BIB, indented with text labels, OS only
IBIB.PS ----- BIB, indented with text labels, PS only
BIBU ----- BIB, with German headers
BIBU.OS ----- BIB, with German headers, OS only
BIBU.PS ----- BIB, with German headers, PS only

STD ----- AN, ED, UP, EW, FS, TI, TIDE, TIFR, IN, PA, SO, DS, PIT, PI,
            OD, AI, PRAI, RLI, NTE, REP, REN, IC (ICM, ICS), ICA, ICI
STD.OS ----- STD, OS only
STD.PS ----- STD, PS only
ISTD ----- STD, indented with text labels
ISTD.OS ----- STD, indented with text labels, OS only
ISTD.PS ----- STD, indented with text labels, PS only
STDU ----- STD, with German headers
STDU.OS ----- STD, with German headers, OS only
STDU.PS ----- STD, with German headers, PS only

IND ----- ED, UP, EW, FS, IC (ICM, ICS), ICA, ICI
IND.OS ----- IND, OS only
IND.PS ----- IND, PS only

TRI ----- TI, TIDE, TIFR, IC (ICM, ICS), ICA, ICI, CLMN, PGC, FA, GIS
TRI.OS ----- TRI, OS only
TRI.PS ----- TRI, PS only

TX ----- DETD, CLM
TX.OS ----- TX, OS only
TX.PS ----- TX, PS only
TXDE ----- DETDDE, CLMDE
TXDE.OS ----- TXDE, OS only
TXDE.PS ----- TXDE, PS only
TXFR ----- DETDFR, CLMFR
TXFR.OS ----- TXFR, OS only
TXFR.PS ----- TXFR, PS only

```

To display a particular field or fields, enter the display field codes. For a list of display field codes, enter 'HELP DFIELDS' at an arrow prompt (=>). Examples of formats include: 'TI'; 'AN,TI,AU'; 'BIB,CT'; 'TI,CT'.

The order of the terms in the formats is not important, but information will be displayed in the same order as the format specification.

The same formats may be used with the DISPLAY ACC command to display the record for a specified accession number.

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\* \* \* \* \* STN Columbus \* \* \* \* \*

FILE 'HOME' ENTERED AT 14:25:06 ON 08 AUG 2003

=> file caplus uspatful europatful japio medline biosis embase		
COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	0.21	0.21

FILE 'CAPLUS' ENTERED AT 14:25:45 ON 08 AUG 2003  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
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FILE 'USPATFULL' ENTERED AT 14:25:45 ON 08 AUG 2003  
CA INDEXING COPYRIGHT (C) 2003 AMERICAN CHEMICAL SOCIETY (ACS)

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COPYRIGHT (c) 2003 WILA Verlag Muenchen (WILA)

FILE 'JAPIO' ENTERED AT 14:25:45 ON 08 AUG 2003  
COPYRIGHT (C) 2003 Japanese Patent Office (JPO)- JAPIO

FILE 'MEDLINE' ENTERED AT 14:25:45 ON 08 AUG 2003

FILE 'BIOSIS' ENTERED AT 14:25:45 ON 08 AUG 2003  
COPYRIGHT (C) 2003 BIOLOGICAL ABSTRACTS INC.(R)

FILE 'EMBASE' ENTERED AT 14:25:45 ON 08 AUG 2003  
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=> s (amino acid) and (partic or powder)  
) IS NOT A RECOGNIZED COMMAND  
The previous command name entered was not recognized by the system.  
For a list of commands available to you in the current file, enter  
"HELP COMMANDS" at an arrow prompt (=>).

=> s (amino acid) and (partic or powder)  
1 FILES SEARCHED...

<-----User Break----->

SEARCH ENDED BY USER  
2 FILES SEARCHED...  
SEARCH ENDED BY USER

=> s (amino acid) and (partic? or powder?)  
1 FILES SEARCHED...  
2 FILES SEARCHED...  
3 FILES SEARCHED...  
L1 204349 (AMINO ACID) AND (PARTIC? OR POWDER?)

=> s l1 and leucine  
L2 36535 L1 AND LEUCINE

=> s l2 and (bulk density)  
L3 150 L2 AND (BULK DENSITY)

ENTER DISPLAY FORMAT (STD):ibib ab

L6 ANSWER 1 OF 1 EUROPATFULL COPYRIGHT 2003 WILA on STN

GRANTED PATENT - ERTEILTES PATENT - BREVET DELIVRE

ACCESSION NUMBER: 1137399 EUROPATFULL EW 200320 FS PS  
TITLE: IMPROVEMENTS IN OR RELATING TO **POWDERS**.  
VERBESSERUNGEN IN BEZUG AUF PULVER.  
AMELIORATIONS APPORTEES A DES POUDRES.  
INVENTOR(S): GANDERTON, David, Crooked Chimneys Cheriton Bishop,  
Exeter EX6 6JL, GB;  
MORTON, David Alexander Vodden, 2nd Floor Flat Linsley  
House Beechen Cliff Road, Bath BA2 4QR, GB;  
LUCAS, Paul, 5 Felderland Close Felderland Lane, Worth  
Deal CT14 0PB, GB  
PATENT ASSIGNEE(S): Vectura Limited, 12 St. James's Square, London SW1Y 4RB,  
GB  
PATENT ASSIGNEE NO: 3050110  
AGENT: Jump, Timothy John Simon et al., Venner Shipley & Co. 20  
Little Britain, London EC1A 7DH, GB  
AGENT NUMBER: 55592  
OTHER SOURCE: MEPB2003026 EP 1137399 B1 0017  
SOURCE: Wila-EPS-2003-H20-T1  
DOCUMENT TYPE: Patent  
LANGUAGE: Anmeldung in Englisch; Veroeffentlichung in Englisch  
DESIGNATED STATES: R AT; R BE; R CH; R CY; R DE; R DK; R ES; R FI; R FR; R  
GB; R GR; R IE; R IT; R LI; R LU; R MC; R NL; R PT; R  
SE; R LT; R LV; R SI  
PATENT INFO.PUB.TYPE: EPB1 EUROPAEISCHE PATENTSCHRIFT (Internationale  
Anmeldung)  
PATENT INFORMATION:  

PATENT NO	KIND	DATE
EP 1137399	B1	20030514
'OFFENLEGUNGS' DATE:		20011004
APPLICATION INFO.:	EP 1999-958404	19991209
PRIORITY APPLN. INFO.:	GB 1998-27145	19981209
RELATED DOC. INFO.:	WO 99-GB4156	991209 INTAKZ
	WO 00033811	000615 INTPNR
REFERENCE PAT. INFO.:	WO 96-23485 A	WO 96-32096 A
	WO 97-03649 A	

=> d his

(FILE 'HOME' ENTERED AT 14:25:06 ON 08 AUG 2003)

FILE 'CAPLUS, USPATFULL, EUROPATFULL, JAPIO, MEDLINE, BIOSIS, EMBASE'  
ENTERED AT 14:25:45 ON 08 AUG 2003

L1 204349 S (AMINO ACID) AND (PARTIC? OR POWDER?)  
L2 36535 S L1 AND LEUCINE  
L3 150 S L2 AND (BULK DENSITY)  
L4 21 S L3 AND (MMAD OR (AERODYNAMIC DIAMETER))  
L5 1 S L4 AND FLAKE  
L6 1 S L4 AND FLAKE?

=> d 14 1-21

L4 ANSWER 1 OF 21 USPATFULL on STN  
AN 2003:187463 USPATFULL  
TI **Particulate** compositions for improving solubility of poorly  
soluble agents

IN Batycky, Richard P., Newton, MA, UNITED STATES  
Grandolfi, George, Milford, OH, UNITED STATES  
Plunkett, Sean, Westborough, MA, UNITED STATES  
Lipp, Michael M., Framingham, MA, UNITED STATES  
Wright, James, Lexington, MA, UNITED STATES  
PA Advanced Inhalation Research Inc., Cambridge, MA, UNITED STATES (U.S.  
corporation)  
PI US 2003129250 A1 20030710  
AI US 2002-300726 A1 20021120 (10)  
PRAI US 2001-331810P 20011120 (60)  
DT Utility  
FS APPLICATION  
LN.CNT 1606  
INCL INCLM: 424/490.000  
INCLS: 514/176.000  
NCL NCLM: 424/490.000  
NCLS: 514/176.000  
IC [7]  
ICM: A61K031-58  
ICS: A61K009-14; A61K009-16  
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 2 OF 21 USPATFULL on STN  
AN 2003:187354 USPATFULL  
TI Pulmonary delivery of aminoglycosides  
IN Tarara, Thomas E., Burlingame, CA, UNITED STATES  
Weers, Jeffry G., Half Moon Bay, CA, UNITED STATES  
Venthoye, Geraldine, Foster City, CA, UNITED STATES  
PI US 2003129140 A1 20030710  
AI US 2002-327510 A1 20021219 (10)  
PRAI US 2001-342827P 20011219 (60)  
DT Utility  
FS APPLICATION  
LN.CNT 1023  
INCL INCLM: 424/046.000  
INCLS: 514/035.000; 514/037.000; 514/039.000  
NCL NCLM: 424/046.000  
NCLS: 514/035.000; 514/037.000; 514/039.000  
IC [7]  
ICM: A61L009-04  
ICS: A61K009-14; A61K031-704  
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 3 OF 21 USPATFULL on STN  
AN 2003:181404 USPATFULL  
TI **Particles** for inhalation having rapid release properties  
IN Schmitke, Jennifer L., Boston, MA, UNITED STATES  
Chen, Donghao, Lexington, MA, UNITED STATES  
Batycky, Richard P., Newton, MA, UNITED STATES  
Edwards, David A., Boston, MA, UNITED STATES  
PA Advanced Inhalation Research, Inc., Cambridge, MA, UNITED STATES (U.S.  
corporation)  
PI US 2003125236 A1 20030703  
AI US 2002-179463 A1 20020624 (10)  
RLI Continuation-in-part of Ser. No. US 2001-888126, filed on 22 Jun 2001,  
PENDING Continuation-in-part of Ser. No. US 2000-752109, filed on 29 Dec  
2000, ABANDONED  
DT Utility  
FS APPLICATION  
LN.CNT 2328  
INCL INCLM: 514/003.000  
INCLS: 514/574.000  
NCL NCLM: 514/003.000  
NCLS: 514/574.000

IC [7]  
ICM: A61K038-28  
ICS: A61K031-19  
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 4 OF 21 USPATFULL on STN  
AN 2003:172669 USPATFULL  
TI **Particles** for inhalation having sustained release properties  
IN Basu, Sujit K., Cambridge, MA, UNITED STATES  
Hrkach, Jeffrey, Cambridge, MA, UNITED STATES  
Lipp, Michael, Framingham, MA, UNITED STATES  
Elbert, Katharina, Cambridge, MA, UNITED STATES  
Edwards, David A., Cambridge, MA, UNITED STATES  
PA Advanced Inhalation Research, Inc., Cambridge, MA (U.S. corporation)  
PI US 2003118513 A1 20030626  
AI US 2002-202616 A1 20020723 (10)  
RLI Continuation of Ser. No. US 2000-752109, filed on 29 Dec 2000, ABANDONED  
DT Utility  
FS APPLICATION  
LN.CNT 1745  
INCL INCLM: 424/046.000  
INCLS: 514/002.000  
NCL NCLM: 424/046.000  
NCLS: 514/002.000  
IC [7]  
ICM: A61K038-00  
ICS: A61K009-00; A61L009-04  
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 5 OF 21 USPATFULL on STN  
AN 2003:172666 USPATFULL  
TI Pulmonary administration of chemically modified insulin  
IN Patton, John S., Los Altos, CA, UNITED STATES  
Kuo, Mei-Chang, Palo Alto, CA, UNITED STATES  
Harris, J. Milton, Huntsville, AL, UNITED STATES  
Leach, Chester, El Granada, CA, UNITED STATES  
Perkins, Kimberly, Belmont, CA, UNITED STATES  
Bueche, Blaine, Castro Valley, CA, UNITED STATES  
PI US 2003118510 A1 20030626  
AI US 2002-154057 A1 20020521 (10)  
PRAI US 2001-292423P 20010521 (60)  
DT Utility  
FS APPLICATION  
LN.CNT 2552  
INCL INCLM: 424/045.000  
INCLS: 514/003.000  
NCL NCLM: 424/045.000  
NCLS: 514/003.000  
IC [7]  
ICM: A61L009-04  
ICS: A61K038-28  
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 6 OF 21 USPATFULL on STN  
AN 2003:99173 USPATFULL  
TI **Particles** for inhalation having sustained release properties  
IN Vanbever, Rita, Brussels, BELGIUM  
Langer, Robert S., Newton, MA, UNITED STATES  
Edwards, David A., Boston, MA, UNITED STATES  
Mintzes, Jeffrey, Brighton, MA, UNITED STATES  
Wang, Jue, Clifton, NJ, UNITED STATES  
Chen, Donghao, Lexington, MA, UNITED STATES  
PA Massachusetts Institute of Technology, Cambridge, MA, UNITED STATES  
(non-U.S. corporation)



PI US 2003068277 A1 20030410  
 AI US 2002-94955 A1 20020307 (10)  
 RLI Continuation of Ser. No. US 2001-909145, filed on 19 Jul 2001, ABANDONED  
 Continuation-in-part of Ser. No. US 1999-394233, filed on 13 Sep 1999,  
 PENDING Continuation-in-part of Ser. No. US 1997-971791, filed on 17 Nov  
 1997, GRANTED, Pat. No. US 5985309  
 PRAI US 1997-59004P 19970915 (60)  
 DT Utility  
 FS APPLICATION  
 LN.CNT 1469  
 INCL INCLM: 424/046.000  
 NCL NCLM: 424/046.000  
 IC [7]  
 ICM: A61K009-14  
 CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 7 OF 21 USPATFULL on STN  
 AN 2003:78040 USPATFULL  
 TI **Powder** formulation  
 IN Heijerman, Hendrikus Gerardus M., Zoetermeer, NETHERLANDS  
 Le Brun, Petrus Paulus H., The Hague, NETHERLANDS  
 Frijlink, Henderik Willem, Eelde, NETHERLANDS  
 de Boer, Anne Haaije, Drachten, NETHERLANDS  
 PA Rijksuniversiteit Groningen, Groningen, NETHERLANDS (non-U.S.  
 corporation)  
 PI US 2003053960 A1 20030320  
 AI US 2002-223707 A1 20020819 (10)  
 RLI Continuation of Ser. No. WO 2001-NL133, filed on 19 Feb 2001, UNKNOWN  
 PRAI EP 2000-200550 20000217  
 DT Utility  
 FS APPLICATION  
 LN.CNT 776  
 INCL INCLM: 424/046.000  
 INCLS: 514/012.000; 514/179.000  
 NCL NCLM: 424/046.000  
 NCLS: 514/012.000; 514/179.000  
 IC [7]  
 ICM: A61L009-04  
 ICS: A61K038-17; A61K031-56; A61K009-14  
 CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 8 OF 21 USPATFULL on STN  
 AN 2003:40663 USPATFULL  
 TI Dry **powder** compositions having improved dispersivity  
 IN Kuo, Mei-Chang, Palo Alto, CA, United States  
 Lechuga-Ballesteros, David, Santa Clara, CA, United States  
 PA Inhale Therapeutic Systems, Inc., San Carlos, CA, United States (U.S.  
 corporation)  
 PI US 6518239 B1 20030211  
 AI US 2000-548759 20000413 (9)  
 PRAI US 2000-178415P 20000127 (60)  
 US 2000-178383P 20000127 (60)  
 US 1999-172769P 19991220 (60)  
 US 1999-164236P 19991108 (60)  
 US 1999-162451P 19991029 (60)  
 DT Utility  
 FS GRANTED  
 LN.CNT 1632  
 INCL INCLM: 514/002.000  
 INCLS: 530/300.000  
 NCL NCLM: 514/002.000  
 NCLS: 530/300.000  
 IC [7]  
 ICM: A01N037-18

ICS: A61K038-00  
EXF 514/2; 530/300  
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 9 OF 21 USPATFULL on STN  
AN 2003:33158 USPATFULL  
TI Pulmonary delivery in treating disorders of the central nervous system  
IN Bartus, Raymond T., Sudbury, MA, United States  
Emerich, Dwaine F., Cranston, RI, United States  
PA Advanced Inhalation Research, Inc., Cambridge, MA, United States (U.S.  
corporation)  
PI US 6514482 B1 20030204  
AI US 2000-665252 20000919 (9)  
DT Utility  
FS GRANTED  
LN.CNT 1360  
INCL INCLM: 424/045.000  
INCLS: 424/043.000; 424/789.000; 514/220.000; 128/203.150  
NCL NCLM: 424/045.000  
NCLS: 128/203.150; 424/043.000; 424/489.000; 514/220.000  
IC [7]  
ICM: A61K009-12  
ICS: A61K009-14; A61K009-72  
EXF 514/220; 514/252; 514/255; 424/45; 424/489; 128/203.15; 560/43  
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 10 OF 21 USPATFULL on STN  
AN 2003:23278 USPATFULL  
TI Control of process humidity to produce large, porous **particles**  
IN Chen, Donghao, Lexington, MA, UNITED STATES  
Batycky, Richard P., Newton, MA, UNITED STATES  
Johnston, Lloyd, Belmont, MA, UNITED STATES  
Mintzes, Jeffrey, Brighton, MA, UNITED STATES  
PA Advanced Inhalation Research, Inc., Cambridge, MA, UNITED STATES, 02139  
(U.S. corporation)  
PI US 2003017113 A1 20030123  
AI US 2001-837620 A1 20010418 (9)  
DT Utility  
FS APPLICATION  
LN.CNT 1000  
INCL INCLM: 424/045.000  
INCLS: 264/005.000  
NCL NCLM: 424/045.000  
NCLS: 264/005.000  
IC [7]  
ICM: A61K009-14  
ICS: A61L009-04; B29B009-00  
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 11 OF 21 USPATFULL on STN  
AN 2002:315079 USPATFULL  
TI Pulmonary delivery of polyene antifungal agents  
IN Weickert, Michael, Belmont, CA, UNITED STATES  
Gordon, Marc S., Sunnyvale, CA, UNITED STATES  
Kumar, Sandeep, Sunnyvale, CA, UNITED STATES  
Yang, Bing, Redwood City, CA, UNITED STATES  
Sarwar, Razaq, Fremont, CA, UNITED STATES  
PI US 2002177562 A1 20021128  
AI US 2001-32239 A1 20011221 (10)  
PRAI US 2000-257613P 20001221 (60)  
DT Utility  
FS APPLICATION  
LN.CNT 1856  
INCL INCLM: 514/027.000

INCLS: 264/005.000  
NCL NCLM: 514/027.000  
NCLS: 264/005.000  
IC [7]  
ICM: A61K031-7048  
ICS: B29B009-00  
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 12 OF 21 USPATFULL on STN  
AN 2002:314374 USPATFULL  
TI Storage stable **powder** compositions of interleukin-4 receptor  
IN Hastedt, Jayne E., San Carlos, CA, UNITED STATES  
Cabot, Kirsten M., San Francisco, CA, UNITED STATES  
Gong, David K., Foster City, CA, UNITED STATES  
Hester, Dennis M., Richmond, CA, UNITED STATES  
PI US 2002176846 A1 20021128  
AI US 2001-32238 A1 20011221 (10)  
PRAI US 2000-256786P 20001221 (60)  
DT Utility  
FS APPLICATION  
LN.CNT 1711  
INCL INCLM: 424/085.200  
NCL NCLM: 424/085.200  
IC [7]  
ICM: A61K038-20  
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 13 OF 21 USPATFULL on STN  
AN 2002:258380 USPATFULL  
TI **Particles** for inhalation having rapid release properties  
IN Schmitke, Jennifer L., Boston, MA, UNITED STATES  
Chen, Donghao, Lexington, MA, UNITED STATES  
Batycky, Richard P., Newton, MA, UNITED STATES  
Edwards, David A., Boston, MA, UNITED STATES  
Hrkach, Jeffrey S., Cambridge, MA, UNITED STATES  
PA Advanced Inhalation Research, Inc., Cambridge, MA (U.S. corporation)  
PI US 2002141946 A1 20021003  
AI US 2001-888126 A1 20010622 (9)  
RLI Continuation-in-part of Ser. No. US 2000-752109, filed on 29 Dec 2000,  
PENDING  
DT Utility  
FS APPLICATION  
LN.CNT 1786  
INCL INCLM: 424/046.000  
INCLS: 514/003.000  
NCL NCLM: 424/046.000  
NCLS: 514/003.000  
IC [7]  
ICM: A61K038-28  
ICS: A61K009-14  
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 14 OF 21 USPATFULL on STN  
AN 2002:126881 USPATFULL  
TI Inhaleable spray dried 4-helix bundle protein **powders** having  
minimized aggregation  
IN Stevenson, Cynthia, Mountain View, CA, UNITED STATES  
Hastedt, Jayne E., San Carlos, CA, UNITED STATES  
Lehrman, S. Russ, Los Altos, CA, UNITED STATES  
Chiang, Hi-Shi, San Jose, CA, UNITED STATES  
Bennett, David B., San Jose, CA, UNITED STATES  
Lesikar, David, Palo Alto, CA, UNITED STATES  
Yang, Bing, Redwood City, CA, UNITED STATES  
Gong, David, San Mateo, CA, UNITED STATES

Cabot, Kirsten, San Francisco, CA, UNITED STATES  
 PA Inhale Therapeutic Systems, Inc., San Carlos, CA, UNITED STATES, 94070  
 (U.S. corporation)  
 PI US 2002065399 A1 20020530  
 US 6569406 B2 20030527  
 AI US 2001-923519 A1 20010807 (9)  
 PRAI US 2000-223144P 20000807 (60)  
 US 2000-228634P 20000829 (60)  
 US 2000-240478P 20001013 (60)  
 DT Utility  
 FS APPLICATION  
 LN.CNT 2046  
 INCL INCLM: 530/399.000  
 INCLS: 424/046.000; 514/002.000  
 NCL NCLM: 424/043.000  
 NCLS: 128/203.150; 424/046.000; 424/489.000; 514/002.000  
 IC [7]  
 ICM: A61K038-27  
 ICS: C07K014-61  
 CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 15 OF 21 USPATFULL on STN  
 AN 2002:112277 USPATFULL  
 TI Pulmonary delivery in treating disorders of the central nervous system  
 IN Bartus, Raymond T., Sudbury, MA, UNITED STATES  
 Emerich, Dwaine F., Cranston, RI, UNITED STATES  
 PA Advanced Inhalation Research, Inc., Cambridge, MA, UNITED STATES, 02139  
 (U.S. corporation)  
 PI US 2002058009 A1 20020516  
 AI US 2001-877734 A1 20010608 (9)  
 RLI Continuation-in-part of Ser. No. US 2000-665252, filed on 19 Sep 2000,  
 PENDING  
 DT Utility  
 FS APPLICATION  
 LN.CNT 2249  
 INCL INCLM: 424/043.000  
 NCL NCLM: 424/043.000  
 IC [7]  
 ICM: A61K009-00  
 CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 16 OF 21 USPATFULL on STN  
 AN 2002:99409 USPATFULL  
 TI **Particles** for inhalation having sustained release properties  
 IN Edwards, David A., Boston, MA, UNITED STATES  
 Langer, Robert S., Newton, MA, UNITED STATES  
 Vanbever, Rita, Brussels, BELGIUM  
 Mintzes, Jeffrey, Brighton, MA, UNITED STATES  
 Wang, Jue, Clifton, NJ, UNITED STATES  
 Chen, Donghao, Quincy, MA, UNITED STATES  
 PA Massachusetts Institute of Technology The Penn State Research Foundation  
 (U.S. corporation)  
 PI US 2002052310 A1 20020502  
 AI US 2000-752106 A1 20001229 (9)  
 RLI Continuation-in-part of Ser. No. US 1999-394233, filed on 13 Sep 1999,  
 PENDING Continuation-in-part of Ser. No. US 1997-971791, filed on 17 Nov  
 1997, GRANTED, Pat. No. US 5985309  
 PRAI US 1997-59004P 19970915 (60)  
 DT Utility  
 FS APPLICATION  
 LN.CNT 1702  
 INCL INCLM: 514/002.000  
 INCLS: 424/043.000  
 NCL NCLM: 514/002.000

NCLS: 424/043.000  
IC [7]  
ICM: A61K038-17  
ICS: A61K009-00  
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 17 OF 21 USPATFULL on STN  
AN 2002:65345 USPATFULL  
TI Highly efficient delivery of a large therapeutic mass aerosol  
IN Edwards, David A., Boston, MA, UNITED STATES  
Batycky, Richard P., Newton, MA, UNITED STATES  
Johnston, Lloyd, Belmont, MA, UNITED STATES  
PA Advanced Inhalation Research, Inc., Cambridge, MA (U.S. corporation)  
PI US 2002035993 A1 20020328  
AI US 2001-878146 A1 20010608 (9)  
RLI Continuation-in-part of Ser. No. US 2000-591307, filed on 9 Jun 2000,  
PENDING  
DT Utility  
FS APPLICATION  
LN.CNT 2844  
INCL INCLM: 128/203.150  
NCL NCLM: 128/203.150  
IC [7]  
ICM: B05D007-14  
ICS: A61M015-00; A61M016-00; B65D083-06  
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 18 OF 21 USPATFULL on STN  
AN 2002:60643 USPATFULL  
TI **Particles** for inhalation having sustained release properties  
IN Edwards, David A., Boston, MA, UNITED STATES  
Hrkach, Jeffrey S., Cambridge, MA, UNITED STATES  
PA Advanced Inhalation Research Inc., Cambridge, MA, UNITED STATES (U.S. corporation)  
PI US 2002034477 A1 20020321  
AI US 2001-822716 A1 20010330 (9)  
RLI Continuation-in-part of Ser. No. US 1999-383054, filed on 25 Aug 1999,  
PENDING  
DT Utility  
FS APPLICATION  
LN.CNT 1396  
INCL INCLM: 424/043.000  
INCLS: 514/004.000  
NCL NCLM: 424/043.000  
NCLS: 514/004.000  
IC [7]  
ICM: A61K038-28  
ICS: A61K009-00  
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 19 OF 21 USPATFULL on STN  
AN 2001:193968 USPATFULL  
TI Modulation of release from dry **powder** formulations  
IN Basu, Sujit K., Cambridge, MA, United States  
Caponetti, Giovanni, Somerville, MA, United States  
Deaver, Daniel R., Franklin, MA, United States  
Elbert, Katharina J., Cambridge, MA, United States  
Hrkach, Jeffrey S., Cambridge, MA, United States  
Lipp, Michael M., Framingham, MA, United States  
PA Advanced Inhalation Research, Inc., Cambridge, MA, United States, 02139  
(U.S. corporation)  
PI US 2001036481 A1 20011101  
AI US 2001-792869 A1 20010223 (9)  
RLI Continuation-in-part of Ser. No. US 2000-644736, filed on 23 Aug 2000,

PENDING  
PRAI US 1999-150742P 19990825 (60)  
DT Utility  
FS APPLICATION  
LN.CNT 1529  
INCL INCLM: 424/499.000  
INCLS: 424/450.000  
NCL NCLM: 424/499.000  
NCLS: 424/450.000  
IC [7]  
ICM: A61K009-14  
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 20 OF 21 EUROPATFULL COPYRIGHT 2003 WILA on STN

GRANTED PATENT - ERTEILTES PATENT - BREVET DELIVRE

AN 1137399 EUROPATFULL ED 20030519 EW 200320 FS PS  
TIEN IMPROVEMENTS IN OR RELATING TO **POWDERS**.  
TIDE VERBESSERUNGEN IN BEZUG AUF PULVER.  
TIFR AMELIORATIONS APPORTEES A DES POUDRES.  
IN GANDERTON, David, Crooked Chimneys Cheriton Bishop, Exeter EX6 6JL, GB;  
MORTON, David Alexander Vodden, 2nd Floor Flat Linsley House Beechen  
Cliff Road, Bath BA2 4QR, GB;  
LUCAS, Paul, 5 Felderland Close Felderland Lane, Worth Deal CT14 0PB, GB  
PA Vectura Limited, 12 St. James's Square, London SW1Y 4RB, GB  
SO Wila-EPS-2003-H20-T1  
DS R AT; R BE; R CH; R CY; R DE; R DK; R ES; R FI; R FR; R GB; R GR; R IE;  
R IT; R LI; R LU; R MC; R NL; R PT; R SE; R LT; R LV; R SI  
PIT EPB1 EUROPAEISCHE PATENTSCHRIFT (Internationale Anmeldung)  
PI EP 1137399 B1 20030514  
OD 20011004  
AI EP 1999-958404 19991209  
PRAI GB 1998-27145 19981209  
RLI WO 99-GB4156 991209 INTAKZ  
WO 00033811 000615 INTPNR  
REP WO 96-23485 A WO 96-32096 A  
WO 97-03649 A  
IC ICM A61K009-00  
ICS A61K009-14 A61K009-72

L4 ANSWER 21 OF 21 EUROPATFULL COPYRIGHT 2003 WILA on STN

PATENT APPLICATION - PATENTANMELDUNG - DEMANDE DE BREVET

AN 1129705 EUROPATFULL ED 20010917 EW 200136 FS OS  
TIEN **Powder** formulation for inhalation.  
TIDE Pulverformulierung zur Inhalation.  
TIFR Formulation en poudre pour inhalation.  
IN Heijerman, Hendrikus, Gerardus Maria, Azuriet 14, 2719 GL Zoetermeer,  
NL;  
Frijlink, Henderik Willem, Hemstukken 19, 9761 KM Eelde, NL;  
Le Brun, Petrus Paulus Hendricus, De Mildestraat 21, 2596 SV The Hague,  
NL;  
de Boer, Anne Haaije, Bouriciuslaan 53, 9203 PC Drachten, NL  
PA Rijksuniversiteit te Groningen, Broerstraat 5, 9712 CP Groningen, NL  
SO Wila-EPZ-2001-H36-T1b  
DS R AT; R BE; R CH; R CY; R DE; R DK; R ES; R FI; R FR; R GB; R GR; R IE;  
R IT; R LI; R LU; R MC; R NL; R PT; R SE; R AL; R LT; R LV; R MK; R RO;  
R SI  
PIT EPA1 EUROPAEISCHE PATENTANMELDUNG  
PI EP 1129705 A1 20010905  
OD 20010905  
AI EP 2000-200550 20000217

AB      Spray dried **particles** having specified aerodynamic characteristics are produced by atomizing a liquid feed and contacting the liquid feed with a drying gas, such as, for example, air or nitrogen. The humidity of the drying gas is controlled to a value, expressed, for instance, as dew point, which is known to produce **particles** having a specified tap density or **aerodynamic diameter**. **Particles** having a volume median geometric diameter greater than about 5 microns and a tap density less than about 0.4 g/cm.<sup>3</sup> are preferred.

L4      ANSWER 11 OF 21    USPATFULL on STN

ACCESSION NUMBER:      2002:315079    USPATFULL  
TITLE:                   Pulmonary delivery of polyene antifungal agents  
INVENTOR(S):            Weickert, Michael, Belmont, CA, UNITED STATES  
                          Gordon, Marc S., Sunnyvale, CA, UNITED STATES  
                          Kumar, Sandeep, Sunnyvale, CA, UNITED STATES  
                          Yang, Bing, Redwood City, CA, UNITED STATES  
                          Sarwar, Razaq, Fremont, CA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002177562	A1	20021128
APPLICATION INFO.:	US 2001-32239	A1	20011221 (10)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2000-257613P	20001221 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	INHALE THERAPEUTIC SYSTEMS, INC, 150 INDUSTRIAL ROAD, SAN CARLOS, CA, 94070	
NUMBER OF CLAIMS:	60	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	1 Drawing Page(s)	
LINE COUNT:	1856	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB      The present invention provides spray-dried polyene compositions for oral inhalation to the lung. The polyene antifungal compositions demonstrate superior aerosol properties, do not exhibit appreciable degradation of the polyene upon spray-drying, and are useful in the treatment and prophylaxis of both pulmonary and systemic fungal infections.

L4      ANSWER 12 OF 21    USPATFULL on STN

ACCESSION NUMBER:      2002:314374    USPATFULL  
TITLE:                   Storage stable **powder** compositions of  
                          interleukin-4 receptor  
INVENTOR(S):            Hastedt, Jayne E., San Carlos, CA, UNITED STATES  
                          Cabot, Kirsten M., San Francisco, CA, UNITED STATES  
                          Gong, David K., Foster City, CA, UNITED STATES  
                          Hester, Dennis M., Richmond, CA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002176846	A1	20021128
APPLICATION INFO.:	US 2001-32238	A1	20011221 (10)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2000-256786P	20001221 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	INHALE THERAPEUTIC SYSTEMS, INC, 150 INDUSTRIAL ROAD, SAN CARLOS, CA, 94070	
NUMBER OF CLAIMS:	43	

EXEMPLARY CLAIM: 1  
NUMBER OF DRAWINGS: 2 Drawing Page(s)  
LINE COUNT: 1711  
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention provides storage stable dry **powder** compositions of IL-4R. The **powder** compositions demonstrate superior chemical and physical stability over their solution counterparts, **particularly** upon storage under varying conditions of temperature and humidity. Moreover, the **powders**, as prepared, possess good aerosol properties, which are maintained upon storage.

L4 ANSWER 13 OF 21 USPATFULL on STN

ACCESSION NUMBER: 2002:258380 USPATFULL  
TITLE: **Particles** for inhalation having rapid release properties  
INVENTOR(S): Schmitke, Jennifer L., Boston, MA, UNITED STATES  
Chen, Donghao, Lexington, MA, UNITED STATES  
Batycky, Richard P., Newton, MA, UNITED STATES  
Edwards, David A., Boston, MA, UNITED STATES  
Hrkach, Jeffrey S., Cambridge, MA, UNITED STATES  
PATENT ASSIGNEE(S): Advanced Inhalation Research, Inc., Cambridge, MA (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002141946	A1	20021003
APPLICATION INFO.:	US 2001-888126	A1	20010622 (9)
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. US 2000-752109, filed on 29 Dec 2000, PENDING		
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	APPLICATION		
LEGAL REPRESENTATIVE:	HAMILTON, BROOK, SMITH & REYNOLDS, P.C., 530 VIRGINIA ROAD, P.O. BOX 9133, CONCORD, MA, 01742-9133		
NUMBER OF CLAIMS:	60		
EXEMPLARY CLAIM:	1		
NUMBER OF DRAWINGS:	7 Drawing Page(s)		
LINE COUNT:	1786		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention generally relates to formulations having **particles** comprising phospholipids, bioactive agent and excipients and the pulmonary delivery thereof. Dry **powder** inhaled insulin formulations are disclosed. Formulations comprising DPPC, insulin and sodium citrate which are useful in the treatment of diabetes are disclosed. Also, the invention relates to a method of for the pulmonary delivery of a bioactive agent comprising administering to the respiratory tract of a patient in need of treatment, or diagnosis an effective amount of **particles** comprising a bioactive agent or any combination thereof in association, wherein release of the agent from the administered **particles** occurs in a rapid fashion.

L4 ANSWER 14 OF 21 USPATFULL on STN

ACCESSION NUMBER: 2002:126881 USPATFULL  
TITLE: Inhaleable spray dried 4-helix bundle protein **powders** having minimized aggregation  
INVENTOR(S): Stevenson, Cynthia, Mountain View, CA, UNITED STATES  
Hastedt, Jayne E., San Carlos, CA, UNITED STATES  
Lehrman, S. Russ, Los Altos, CA, UNITED STATES  
Chiang, Hi-Shi, San Jose, CA, UNITED STATES  
Bennett, David B., San Jose, CA, UNITED STATES  
Lesikar, David, Palo Alto, CA, UNITED STATES  
Yang, Bing, Redwood City, CA, UNITED STATES  
Gong, David, San Mateo, CA, UNITED STATES  
Cabot, Kirsten, San Francisco, CA, UNITED STATES



PATENT ASSIGNEE(S): Inhale Therapeutic Systems, Inc., San Carlos, CA,  
UNITED STATES, 94070 (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002065399	A1	20020530
	US 6569406	B2	20030527
APPLICATION INFO.:	US 2001-923519	A1	20010807 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2000-223144P	20000807 (60)
	US 2000-228634P	20000829 (60)
	US 2000-240478P	20001013 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	INHALE THERAPEUTIC SYSTEMS, INC, 150 INDUSTRIAL ROAD, SAN CARLOS, CA, 94070	
NUMBER OF CLAIMS:	52	
EXEMPLARY CLAIM:	1	
LINE COUNT:	2046	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention provides highly dispersible spray-dried **powder** compositions, and in **particular**, inhaleable dry **powder** compositions for aerosolized delivery to the lungs. The **powders** of the invention are produced by spray drying a 4 .alpha.-helix bundle protein under conditions which both (i) protect the protein from aggregation and (ii) provide **particles** suitable for inhalation (i.e., demonstrating superior aerosol performance).

L4 ANSWER 15 OF 21 USPATFULL on STN

ACCESSION NUMBER: 2002:112277 USPATFULL  
TITLE: Pulmonary delivery in treating disorders of the central nervous system  
INVENTOR(S): Bartus, Raymond T., Sudbury, MA, UNITED STATES  
Emerich, Dwaine F., Cranston, RI, UNITED STATES  
PATENT ASSIGNEE(S): Advanced Inhalation Research, Inc., Cambridge, MA,  
UNITED STATES, 02139 (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002058009	A1	20020516
APPLICATION INFO.:	US 2001-877734	A1	20010608 (9)
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. US 2000-665252, filed on 19 Sep 2000, PENDING		
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	APPLICATION		
LEGAL REPRESENTATIVE:	Ms. Carolyn S. Elmore, HAMILTON, BROOK, SMITH & REYNOLDS, P.C., Two Militia Drive, Lexington, MA, 02421-4799		
NUMBER OF CLAIMS:	65		
EXEMPLARY CLAIM:	1		
NUMBER OF DRAWINGS:	24 Drawing Page(s)		
LINE COUNT:	2249		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A method for treating a disorder of the central nervous system includes administering to the respiratory tract of a patient a drug which is delivered to the pulmonary system, for instance to the alveoli or the deep lung. The drug is administered at a dose which is at least about two-fold less than the dose required by oral administration. **Particles** that include the drug can be employed. Preferred **particles** have a tap density of less than about 0.4 g/cm.sup.3. In addition to the medicament, the **particles** can include other materials such as, for example, phospholipids, amino acids, combinations

thereof and others.

L4 ANSWER 16 OF 21 USPATFULL on STN

ACCESSION NUMBER: 2002:99409 USPATFULL

TITLE: **Particles** for inhalation having sustained release properties

INVENTOR(S): Edwards, David A., Boston, MA, UNITED STATES  
Langer, Robert S., Newton, MA, UNITED STATES  
Vanbever, Rita, Brussels, BELGIUM  
Mintzes, Jeffrey, Brighton, MA, UNITED STATES  
Wang, Jue, Clifton, NJ, UNITED STATES

Chen, Donghao, Quincy, MA, UNITED STATES  
PATENT ASSIGNEE(S): Massachusetts Institute of Technology The Penn State  
Research Foundation (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002052310	A1	20020502
APPLICATION INFO.:	US 2000-752106	A1	20001229 (9)
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. US 1999-394233, filed on 13 Sep 1999, PENDING Continuation-in-part of Ser. No. US 1997-971791, filed on 17 Nov 1997, GRANTED, Pat. No. US 5985309		

	NUMBER	DATE
PRIORITY INFORMATION:	US 1997-59004P	19970915 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	Carolyn S. Elmore, HAMILTON, BROOK, SMITH & REYNOLDS, P.C., Two Militia Drive, Lexington, MA, 02421-4799	
NUMBER OF CLAIMS:	34	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	3 Drawing Page(s)	
LINE COUNT:	1702	
CAS INDEXING IS AVAILABLE FOR THIS PATENT.		

AB The invention generally relates to a method for pulmonary delivery of therapeutic, prophylactic and diagnostic agents to a patient wherein the agent is released in a sustained fashion, and to **particles** suitable for use in the method. In **particular**, the invention relates to a method for the pulmonary delivery of a therapeutic, prophylactic or diagnostic agent comprising administering to the respiratory tract of a patient in need of treatment, prophylaxis or diagnosis an effective amount of **particles** comprising a therapeutic, prophylactic or diagnostic agent or any combination thereof in association with a charged lipid, wherein the charged lipid has an overall net charge which is opposite to that of the agent upon association with the agent. Release of the agent from the administered **particles** occurs in a sustained fashion.

L4 ANSWER 17 OF 21 USPATFULL on STN

ACCESSION NUMBER: 2002:65345 USPATFULL

TITLE: Highly efficient delivery of a large therapeutic mass aerosol

INVENTOR(S): Edwards, David A., Boston, MA, UNITED STATES  
Batycky, Richard P., Newton, MA, UNITED STATES  
Johnston, Lloyd, Belmont, MA, UNITED STATES

PATENT ASSIGNEE(S): Advanced Inhalation Research, Inc., Cambridge, MA (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002035993	A1	20020328
APPLICATION INFO.:	US 2001-878146	A1	20010608 (9)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 2000-591307, filed on 9 Jun 2000, PENDING

DOCUMENT TYPE: Utility

FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: Ms. Carolyn S. Elmore, HAMILTON, BROOK, SMITH & REYNOLDS, P.C., Two Militia Drive, Lexington, MA, 02421-4799

NUMBER OF CLAIMS: 151

EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 21 Drawing Page(s)

LINE COUNT: 2844

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A method for delivering an agent to the pulmonary system, in a single, breath-activated step or a single breath, comprises administering from a receptacle enclosing a mass of **particles**, to a subject's respiratory tract, **particles** which have a tap density of less than 0.4 g/cm.<sup>sup.3</sup> and deliver at least about 50% of the mass of **particles**. The **particles** are capable of carrying agents. The agent is (1) part of the spray-drying pre-mixture and thereby incorporated into the **particles**, (2) added to separately-prepared **particles** so that the agent is in chemical association with the **particles** or (3) blended so that the agent is mixed with, and co-delivered with the **particles**.

Respirable compositions comprising carrier **particles** having a tap density of less than 0.4 g/cm.<sup>sup.3</sup> and a composition comprising an agent are also disclosed. Methods of delivering these respirable compositions are also included.

L4 ANSWER 18 OF 21 USPATFULL on STN

ACCESSION NUMBER: 2002:60643 USPATFULL

TITLE: **Particles** for inhalation having sustained release properties

INVENTOR(S): Edwards, David A., Boston, MA, UNITED STATES

Hrkach, Jeffrey S., Cambridge, MA, UNITED STATES

PATENT ASSIGNEE(S): Advanced Inhalation Research Inc., Cambridge, MA, UNITED STATES (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002034477	A1	20020321
APPLICATION INFO.:	US 2001-822716	A1	20010330 (9)
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. US 1999-383054, filed on 25 Aug 1999, PENDING		
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	APPLICATION		
LEGAL REPRESENTATIVE:	Carolyn S. Elmore, HAMILTON, BROOK, SMITH & REYNOLDS, P.C., Two Militia Drive, Lexington, MA, 02421-4799		
NUMBER OF CLAIMS:	52		
EXEMPLARY CLAIM:	1		
NUMBER OF DRAWINGS:	3 Drawing Page(s)		
LINE COUNT:	1396		
CAS INDEXING IS AVAILABLE FOR THIS PATENT.			

AB The invention generally relates to a method for pulmonary delivery of therapeutic, prophylactic and diagnostic agents to a patient wherein the agent is released in a sustained fashion, and to **particles** suitable for use in the method. In **particular**, the invention relates to a method for the pulmonary delivery of a therapeutic, prophylactic or diagnostic agent comprising administering to the respiratory tract of a patient in need of treatment, prophylaxis or diagnosis an effective amount of **particles** comprising a multivalent metal cation which is complexed with a therapeutic, prophylactic or diagnostic agent or any combination thereof having a charge capable of complexing with the cation upon association with the

agent, a pharmaceutically acceptable carrier and optionally, a multivalent metal cation-containing component wherein the total amount of multivalent metal cation present in the **particles** is more than 1% weight/weight of the total weight of the agent (% w/w). Release of the agent from the administered **particles** occurs in a sustained fashion.

L4 ANSWER 19 OF 21 USPATFULL on STN

ACCESSION NUMBER: 2001:193968 USPATFULL

TITLE: Modulation of release from dry **powder** formulations

INVENTOR(S): Basu, Sujit K., Cambridge, MA, United States  
Caponetti, Giovanni, Somerville, MA, United States  
Deaver, Daniel R., Franklin, MA, United States  
Elbert, Katharina J., Cambridge, MA, United States  
Hrkach, Jeffrey S., Cambridge, MA, United States  
Lipp, Michael M., Framingham, MA, United States

PATENT ASSIGNEE(S): Advanced Inhalation Research, Inc., Cambridge, MA, United States, 02139 (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2001036481	A1	20011101
APPLICATION INFO.:	US 2001-792869	A1	20010223 (9)
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. US 2000-644736, filed on 23 Aug 2000, PENDING		

	NUMBER	DATE
PRIORITY INFORMATION:	US 1999-150742P	19990825 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	HAMILTON BROOK SMITH AND REYNOLDS, P.C., TWO MILITIA DR, LEXINGTON, MA, 02421-4799	
NUMBER OF CLAIMS:	41	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	9 Drawing Page(s)	
LINE COUNT:	1529	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB **Particles** which include a bioactive agent are prepared to have a desired matrix transition temperature. Delivery of the **particles** via the pulmonary system results in modulation of drug release from the **particles**. Sustained release and/or sustained pharmacologic action of the drug can be obtained by forming **particles** which include a combination of phospholipids that are miscible in one another and have a high matrix transition temperature.

L4 ANSWER 20 OF 21 EUROPATFULL COPYRIGHT 2003 WILA on STN

GRANTED PATENT - ERTEILTES PATENT - BREVET DELIVRE

ACCESSION NUMBER: 1137399 EUROPATFULL EW 200320 FS PS

TITLE: IMPROVEMENTS IN OR RELATING TO **POWDERS**.  
VERBESSERUNGEN IN BEZUG AUF PULVER.  
AMELIORATIONS APPORTEES A DES POUDRES.

INVENTOR(S): GANDERTON, David, Crooked Chimneys Cheriton Bishop, Exeter EX6 6JL, GB;  
MORTON, David Alexander Vodden, 2nd Floor Flat Linsley House Beechen Cliff Road, Bath BA2 4QR, GB;  
LUCAS, Paul, 5 Felderland Close Felderland Lane, Worth Deal CT14 0PB, GB

PATENT ASSIGNEE(S): Vectura Limited, 12 St. James's Square, London SW1Y 4RB, GB

PATENT ASSIGNEE NO: 3050110

AGENT: Jump, Timothy John Simon et al., Venner Shipley & Co. 20  
 Little Britain, London EC1A 7DH, GB  
 AGENT NUMBER: 55592  
 OTHER SOURCE: MEPB2003026 EP 1137399 B1 0017  
 SOURCE: Wila-EPS-2003-H20-T1  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Anmeldung in Englisch; Veroeffentlichung in Englisch  
 DESIGNATED STATES: R AT; R BE; R CH; R CY; R DE; R DK; R ES; R FI; R FR; R  
 GB; R GR; R IE; R IT; R LI; R LU; R MC; R NL; R PT; R  
 SE; R LT; R LV; R SI  
 PATENT INFO.PUB.TYPE: EPB1 EUROPÄISCHE PATENTSCHRIFT (Internationale  
 Anmeldung)

PATENT INFORMATION:

	PATENT NO	KIND DATE
	EP 1137399	B1 20030514
'OFFENLEGUNGS' DATE:		20011004
APPLICATION INFO.:	EP 1999-958404	19991209
PRIORITY APPLN. INFO.:	GB 1998-27145	19981209
RELATED DOC. INFO.:	WO 99-GB4156	991209 INTAKZ
	WO 00033811	000615 INTPNR
REFERENCE PAT. INFO.:	WO 96-23485 A	WO 96-32096 A
	WO 97-03649 A	

L4 ANSWER 21 OF 21 EUROPATFULL COPYRIGHT 2003 WILA on STN

PATENT APPLICATION - PATENTANMELDUNG - DEMANDE DE BREVET

ACCESSION NUMBER: 1129705 EUROPATFULL EW 200136 FS OS  
 TITLE: **Powder** formulation for inhalation.  
 Pulverformulierung zur Inhalation.  
 Formulation en poudre pour inhalation.  
 INVENTOR(S): Heijerman, Hendrikus, Gerardus Maria, Azuriet 14, 2719  
 GL Zoetermeer, NL;  
 Frijlink, Henderik Willem, Hemstukken 19, 9761 KM Eelde,  
 NL;  
 Le Brun, Petrus Paulus Hendricus, De Mildestraat 21,  
 2596 SV The Hague, NL;  
 de Boer, Anne Haaije, Bouriciuslaan 53, 9203 PC  
 Drachten, NL  
 PATENT ASSIGNEE(S): Rijksuniversiteit te Groningen, Broerstraat 5, 9712 CP  
 Groningen, NL  
 PATENT ASSIGNEE NO: 406260  
 AGENT: Ottevangers, Sietse Ulbe et al., Vereenigde, Postbus  
 87930, 2508 DH Den Haag, NL  
 AGENT NUMBER: 20841  
 OTHER SOURCE: BEPA2001070 EP 1129705 A1 0017  
 SOURCE: Wila-EPZ-2001-H36-T1b  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Anmeldung in Englisch; Veroeffentlichung in Englisch  
 DESIGNATED STATES: R AT; R BE; R CH; R CY; R DE; R DK; R ES; R FI; R FR; R  
 GB; R GR; R IE; R IT; R LI; R LU; R MC; R NL; R PT; R  
 SE; R AL; R LT; R LV; R MK; R RO; R SI  
 PATENT INFO.PUB.TYPE: EPA1 EUROPÄISCHE PATENTANMELDUNG

PATENT INFORMATION:

	PATENT NO	KIND DATE
	EP 1129705	A1 20010905
'OFFENLEGUNGS' DATE:		20010905
APPLICATION INFO.:	EP 2000-200550	20000217

ABEN The invention relates to a **powder** formulation for  
 administration by inhalation comprising an active substance and a  
 pharmaceutically acceptable excipient, which composition has the form of  
 a physical mixture and comprises from 5 to 25 wt.% of the excipient, and

wherein the active substance has a **particle** size distribution of from 0.5 to 10 .mu.m, and wherein the excipient has a **particle** size distribution of from 15 to 500 .mu.m.

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ICS A61K009-14 A61K038-12 A61M015-00

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"HELP COMMANDS" at an arrow prompt (=>).

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L4 ANSWER 1 OF 21 USPATFULL on STN

ACCESSION NUMBER: 2003:187463 USPATFULL

TITLE: **Particulate** compositions for improving  
solubility of poorly soluble agents

INVENTOR(S): Batycky, Richard P., Newton, MA, UNITED STATES  
Grandolfi, George, Milford, OH, UNITED STATES  
Plunkett, Sean, Westborough, MA, UNITED STATES  
Lipp, Michael M., Framingham, MA, UNITED STATES  
Wright, James, Lexington, MA, UNITED STATES

PATENT ASSIGNEE(S): Advanced Inhalation Research Inc., Cambridge, MA,  
UNITED STATES (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003129250	A1	20030710
APPLICATION INFO.:	US 2002-300726	A1	20021120 (10)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2001-331810P	20011120 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	HAMILTON, BROOK, SMITH & REYNOLDS, P.C., 530 VIRGINIA ROAD, P.O. BOX 9133, CONCORD, MA, 01742-9133	
NUMBER OF CLAIMS:	63	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	9 Drawing Page(s)	
LINE COUNT:	1606	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention is drawn to **particles** for oral drug delivery  
produced by spray-drying a dilute solution of a poorly soluble agent.  
The **particles** comprise regions of poorly soluble agent wherein  
the dissolution rate enhancement is between about 2-fold and about  
25-fold compared to the agent in bulk form.

L4 ANSWER 2 OF 21 USPATFULL on STN

ACCESSION NUMBER: 2003:187354 USPATFULL

TITLE: Pulmonary delivery of aminoglycosides

INVENTOR(S): Tarara, Thomas E., Burlingame, CA, UNITED STATES  
Weers, Jeffry G., Half Moon Bay, CA, UNITED STATES  
Venthoey, Geraldine, Foster City, CA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003129140	A1	20030710
APPLICATION INFO.:	US 2002-327510	A1	20021219 (10)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2001-342827P	20011219 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	

LEGAL REPRESENTATIVE: NEKTAR THERAPEUTICS, 150 INDUSTRIAL ROAD, SAN CARLOS,  
CA, 94070

NUMBER OF CLAIMS: 35

EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 4 Drawing Page(s)

LINE COUNT: 1023

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention is directed to the administration of aminoglycosides. In **particular**, the present invention is directed to compositions and methods for the pulmonary administration of aminoglycosides. According to a preferred embodiment, compositions and methods are provided for the localized treatment of respiratory infections.

L4 ANSWER 3 OF 21 USPATFULL on STN

ACCESSION NUMBER: 2003:181404 USPATFULL

TITLE: **Particles** for inhalation having rapid release properties

INVENTOR(S): Schmitke, Jennifer L., Boston, MA, UNITED STATES  
Chen, Donghao, Lexington, MA, UNITED STATES  
Batycky, Richard P., Newton, MA, UNITED STATES  
Edwards, David A., Boston, MA, UNITED STATES

PATENT ASSIGNEE(S): Advanced Inhalation Research, Inc., Cambridge, MA,  
UNITED STATES (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003125236	A1	20030703
APPLICATION INFO.:	US 2002-179463	A1	20020624 (10)
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. US 2001-888126, filed on 22 Jun 2001, PENDING Continuation-in-part of Ser. No. US 2000-752109, filed on 29 Dec 2000, ABANDONED		
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	APPLICATION		
LEGAL REPRESENTATIVE:	HAMILTON, BROOK, SMITH & REYNOLDS, P.C., 530 VIRGINIA ROAD, P.O. BOX 9133, CONCORD, MA, 01742-9133		
NUMBER OF CLAIMS:	79		
EXEMPLARY CLAIM:	1		
NUMBER OF DRAWINGS:	7 Drawing Page(s)		
LINE COUNT:	2328		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention generally relates to formulations having **particles** comprising phospholipids, bioactive agent and excipients and the pulmonary delivery thereof. Dry **powder** inhaled insulin formulations are disclosed. Improved formulations comprising DPPC, insulin and sodium citrate which are useful in the treatment of diabetes are disclosed. Also, the invention relates to a method of for the pulmonary delivery of a bioactive agent comprising administering to the respiratory tract of a patient in need of treatment, or diagnosis an effective amount of **particles** comprising a bioactive agent or any combination thereof in association, wherein release of the agent from the administered **particles** occurs in a rapid fashion.

L4 ANSWER 4 OF 21 USPATFULL on STN

ACCESSION NUMBER: 2003:172669 USPATFULL

TITLE: **Particles** for inhalation having sustained release properties

INVENTOR(S): Basu, Sujit K., Cambridge, MA, UNITED STATES  
Hrkach, Jeffrey, Cambridge, MA, UNITED STATES  
Lipp, Michael, Framingham, MA, UNITED STATES  
Elbert, Katharina, Cambridge, MA, UNITED STATES  
Edwards, David A., Cambridge, MA, UNITED STATES

PATENT ASSIGNEE(S): Advanced Inhalation Research, Inc., Cambridge, MA (U.S. corporation)



	NUMBER	KIND	DATE
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PATENT INFORMATION:	US 2003118513	A1	20030626
APPLICATION INFO.:	US 2002-202616	A1	20020723 (10)
RELATED APPLN. INFO.:	Continuation of Ser. No. US 2000-752109, filed on 29 Dec 2000, ABANDONED		
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	APPLICATION		
LEGAL REPRESENTATIVE:	HAMILTON, BROOK, SMITH & REYNOLDS, P.C., 530 VIRGINIA ROAD, P.O. BOX 9133, CONCORD, MA, 01742-9133		
NUMBER OF CLAIMS:	47		
EXEMPLARY CLAIM:	1		
NUMBER OF DRAWINGS:	3 Drawing Page(s)		
LINE COUNT:	1745		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention generally relates to a method for pulmonary delivery of therapeutic, prophylactic and diagnostic agents to a patient wherein the agent is released in a sustained fashion, and to **particles** suitable for use in the method. In **particular**, the invention relates to a method for the pulmonary delivery of a therapeutic, prophylactic or diagnostic agent comprising administering to the respiratory tract of a patient in need of treatment, prophylaxis or diagnosis an effective amount of **particles** comprising a therapeutic, prophylactic or diagnostic agent or any combination thereof in association with a charged lipid, wherein the charged lipid has an overall net charge which is opposite to that of the agent upon association with the agent. Release of the agent from the administered **particles** occurs in a sustained fashion.

L4 ANSWER 5 OF 21 USPATFULL on STN

ACCESSION NUMBER: 2003:172666 USPATFULL  
 TITLE: Pulmonary administration of chemically modified insulin  
 INVENTOR(S): Patton, John S., Los Altos, CA, UNITED STATES  
 Kuo, Mei-Chang, Palo Alto, CA, UNITED STATES  
 Harris, J. Milton, Huntsville, AL, UNITED STATES  
 Leach, Chester, El Granada, CA, UNITED STATES  
 Perkins, Kimberly, Belmont, CA, UNITED STATES  
 Bueche, Blaine, Castro Valley, CA, UNITED STATES

	NUMBER	KIND	DATE
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PATENT INFORMATION:	US 2003118510	A1	20030626
APPLICATION INFO.:	US 2002-154057	A1	20020521 (10)

	NUMBER	DATE
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PRIORITY INFORMATION:	US 2001-292423P	20010521 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	INHALE THERAPEUTIC SYSTEMS, INC, 150 INDUSTRIAL ROAD, SAN CARLOS, CA, 94070	
NUMBER OF CLAIMS:	77	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	14 Drawing Page(s)	
LINE COUNT:	2552	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention provides active, hydrophilic polymer-modified derivatives of insulin. The insulin derivatives of the invention are, in one aspect, suitable for delivery to the lung and exhibit pharmacokinetic and/or pharmacodynamic properties that are significantly improved over native insulin.

L4 ANSWER 6 OF 21 USPATFULL on STN

ACCESSION NUMBER: 2003:99173 USPATFULL  
TITLE: **Particles** for inhalation having sustained release properties  
INVENTOR(S): Vanbever, Rita, Brussels, BELGIUM  
Langer, Robert S., Newton, MA, UNITED STATES  
Edwards, David A., Boston, MA, UNITED STATES  
Mintzes, Jeffrey, Brighton, MA, UNITED STATES  
Wang, Jue, Clifton, NJ, UNITED STATES  
Chen, Donghao, Lexington, MA, UNITED STATES  
PATENT ASSIGNEE(S): Massachusetts Institute of Technology, Cambridge, MA, UNITED STATES (non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003068277	A1	20030410
APPLICATION INFO.:	US 2002-94955	A1	20020307 (10)
RELATED APPLN. INFO.:	Continuation of Ser. No. US 2001-909145, filed on 19 Jul 2001, ABANDONED Continuation-in-part of Ser. No. US 1999-394233, filed on 13 Sep 1999, PENDING Continuation-in-part of Ser. No. US 1997-971791, filed on 17 Nov 1997, GRANTED, Pat. No. US 5985309		

	NUMBER	DATE
PRIORITY INFORMATION:	US 1997-59004P	19970915 (60)
DOCUMENT TYPE:	Utility APPLICATION	
FILE SEGMENT:	HAMILTON, BROOK, SMITH & REYNOLDS, P.C., 530 VIRGINIA ROAD, P.O. BOX 9133, CONCORD, MA, 01742-9133	
LEGAL REPRESENTATIVE:		
NUMBER OF CLAIMS:	51	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	2 Drawing Page(s)	
LINE COUNT:	1469	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention generally relates to a method for pulmonary delivery of therapeutic, prophylactic and diagnostic agents to a patient wherein the agent is released in a sustained fashion, and to **particles** suitable for use in the method. In **particular**, the invention relates to a method for the pulmonary delivery of a therapeutic, prophylactic or diagnostic agent comprising administering to the respiratory tract of a patient in need of treatment, prophylaxis or diagnosis an effective amount of **particles** comprising a polycationic complexing agent which is complexed with a therapeutic, prophylactic or diagnostic agent or any combination thereof having a charge capable of complexing with the polycationic complexing agent upon association with the bioactive agent. The **particles** can further comprise a pharmaceutically acceptable carrier. The amount of polycationic complexing agent present in the **particles** is an amount sufficient to sustain the release of diagnostic, therapeutic or prophylactic agent from the **particles**. For example, the amount of complexing agent present can be at about 5% weight/weight (w/w) or more of the total weight of the complexing agent and therapeutic, diagnostic or prophylactic agent. Release of the agent from the administered **particles** occurs in a sustained fashion.

L4 ANSWER 7 OF 21 USPATFULL on STN  
ACCESSION NUMBER: 2003:78040 USPATFULL  
TITLE: **Powder** formulation  
INVENTOR(S): Heijerman, Hendrikus Gerardus M., Zoetermeer, NETHERLANDS  
Le Brun, Petrus Paulus H., The Hague, NETHERLANDS  
Frijlink, Henderik Willem, Eelde, NETHERLANDS  
de Boer, Anne Haaije, Drachten, NETHERLANDS  
PATENT ASSIGNEE(S): Rijksuniversiteit Groningen, Groningen, NETHERLANDS